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ABSTRACT:
PURPOSE: To facilitate the mounting work efficiency of a temperature fuse to be attached to a coil bobbin device and prevent erroneous wiring.

CONSTITUTION: A coil bobbin 14 is provided with three terminals 15, 16, and 17, and one terminal 16 is made a middle terminal for connecting the lead wire 20 of a temperature fuse 18 with one end of a coil 21.

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(54) COIL BOBBIN DEVICE

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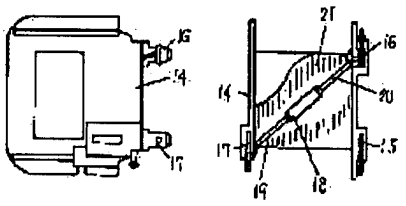

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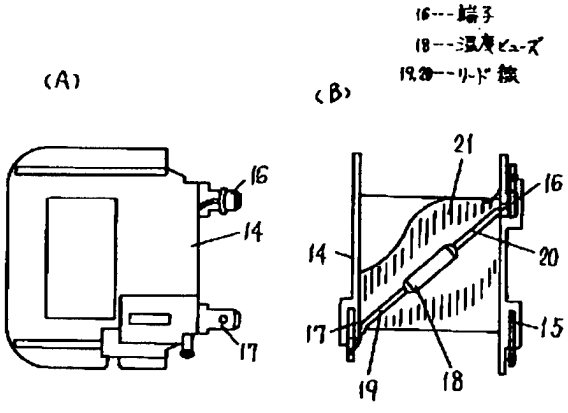
(54)【発明の名称】　コイルボビン装置

(57)【要約】
【目的】　コイルボビン装置に取り付ける温度ヒューズの取り付け作業性を容易にし、かつ誤結線を防止する。
【構成】　コイルボビン１４に端子１５，１６，１７を３つ設け、１つの端子１６は温度ヒューズ１８のリード線２０とコイル２１の一端とを接続するための中間端子とした。



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【特許請求の範囲】

【請求項１】コイルボビンに３つの端子を設け、第１の端子にコイルの巻始め線を接続し、第２の端子にコイルの巻終り線と温度ヒューズの一方のリード線とを接続し、第３の端子に上記温度ヒューズの他方のリード線を接続したコイルボビン装置。

【発明の詳細な説明】

【０００１】

【産業上の利用分野】本発明は過熱防止手段を有するモータ等に用いることのできるコイルボビン装置に関するものである。

【０００２】

【従来の技術】従来、モータの過熱等による事故を未然に防止するために、コイルボビンに巻装された巻線部に温度ヒューズを付けて過昇防止としていた。一方、このコイルボビンへのコイル巻装作業は人手によらず、自動的に機械で巻装されるようになってきている。

【０００３】図３，図４に従来例の構成を示す。図３において、ボビン１にコイル２が巻装され、この表面を保護テープ３が覆っている。温度ヒューズ４は絶縁チューブ５の中に収納され、一端を端子６、他端をコイル２の巻終り線半田部７に接続されている。コイル２の巻始め線はその巻始め線半田部８が端子９に接続されている。１０はコイル２の巻終り線、１１は巻終り線半田部７を覆う絶縁チューブである。

【０００４】図３の例では材料，工数共にひじょうに多くかかり、また性能としても温度ヒューズ４の熱感知が悪く信頼性にも問題があった。

【０００５】図４の例は温度ヒューズ４の両端のリード線に絶縁チューブ１２，１３をかぶせたものであるが、巻終り線１０との結線をコイル上で行うため絶縁チューブ１１がやはり必要となる。しかもこの構成ではコイルの巻装の自動化は困難である。

【０００６】

【発明が解決しようとする課題】本発明はこのような温度ヒューズの取り付けを自動機械で行い、手作業によらないで作業効率を向上させることを目的とする。

【０００７】

【課題を解決するための手段】このため本発明は、コイルを巻装するボビンに電源接続用の端子に加えて巻始め線又は巻終り線を接続する中間端子を設けたものである。

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【０００８】

【作用】この構成により、温度ヒューズの巻線部への取り付けは中間端子を用いればよく作業が容易になる。

【０００９】

【実施例】以下、本発明の一実施例を図を用いて説明する。

【００１０】図１，図２（Ａ），（Ｂ）においてボビン１４に３つの端子１５，１６，１７が設けられており、コイル２１の巻始め線は端子１５へ接続され、巻終り線は端子１６へ接続されている。また温度ヒューズ１８の一方のリード線１９は端子１７へ接続され、他方のリード線２０は上記中間端子１６へ接続されている。このとき端子１６に接続された温度ヒューズ１８のリード線２０は中間端子１６の外部に巻き付けられ、メス端子が挿入できないようにしてある。なお上記温度ヒューズ１８はコイル２１の上に直接装着されている。図１はこのコイルボビンを有するモータの外観である。

【００１１】

【発明の効果】上記構成により本発明は、温度ヒューズの取り付けが容易になり、自動機械による作業の自動化を図ることができる。

【００１２】しかも中間端子にはメス端子が挿入できないようにしてあるので誤結線による温度ヒューズの不作動，ショート等の事故を未然に防止できるものである。

【図面の簡単な説明】

【図１】本発明の一実施例のコイルボビン装置を用いたモータの正面図

【図２】（Ａ）は本発明の一実施例のコイルボビン装置の正面図

（Ｂ）は同装置の要部切欠側面図

【図３】従来のコイルボビン装置の要部切欠側面図

【図４】従来のコイルボビン装置の要部切欠側面図

【符号の説明】

１４　ボビン

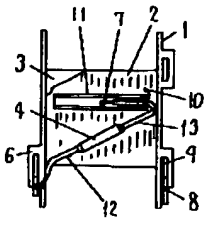
１５，１６，１７　端子

１８　温度ヒューズ

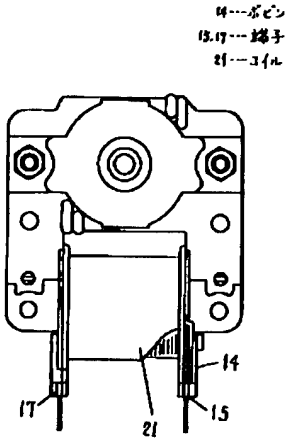
１９，２０　リード線

２１　コイル

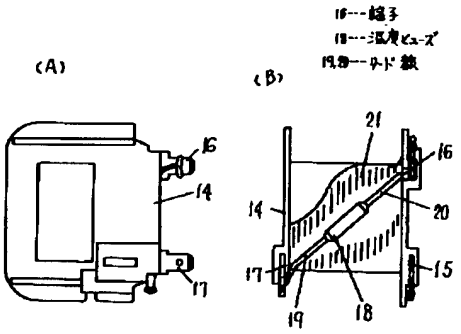
【図４】



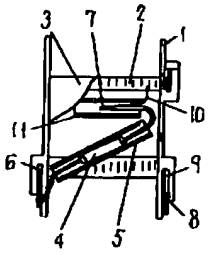
【図1】



【図2】



【図3】



DETAILED DESCRIPTION

[Detailed description]
[0001]
[Field of the Invention] this invention relates to the coil bobbin equipment which can be used for the motor which has an overheating prevention means.
[0002]
[Prior art] In order to prevent the accident by overheating of a motor etc. beforehand conventionally, the thermal fuse was attached to the coil section with which the coil bobbin was wound, and it was considering as **** prevention. On the other hand, the coil winding work to this coil bobbin is not based on a help, but it has come to wind it by machine automatically.
[0003] The configuration of the conventional example is shown in drawing 3 and drawing 4 . In drawing 3 , a bobbin 1 is wound with a coil 2 and masking tape 3 is covered with this front face. A thermal fuse 4 is contained in the insulating tube 5, an end is connected to a terminal 6 and, as for it, the other end is connected to the end line solder section 7 of a volume of a coil 2. As for the line, the line solder section 8 is connected to the terminal 9 at the beginning of a volume at volume the beginning of a coil 2. 10 is the end line of a volume of a coil 2, and 11 is a wrap insulation tube about the end line solder section 7 of a volume.
[0004] In the example of drawing 3 , the material and the man day started mostly very much, and heat sensing of a thermal fuse 4 is bad also as a performance, and there was a problem also in a reliability.
[0005] Although the example of drawing 4 puts the insulating tubes 12 and 13 on the lead wire of the ends of a thermal fuse 4, in order to perform connection with the end line 10 of a volume on a coil, the insulating tube 11 is needed too. And the automation of winding of a coil with this configuration is difficult.
[0006]
[Object of the Invention] this invention attaches such a thermal fuse by the automaton, and aims at raising working efficiency without being based on a handicraft.
[0007]
[The means for solving a technical problem] For this reason, this invention prepares the interval terminal which connects a line or the end line of a volume to the bobbin which winds a coil at the beginning of a volume in addition to the terminal for power connection.
[0008]
[Operation] By this configuration, work becomes easy that the installation to the coil section of a thermal fuse should just use an interval terminal.
[0009]
[Example] Hereafter, one example of this invention is explained using drawing.
[0010] In drawing 1 , drawing 2 (A), and (B), three terminals 15, 16, and 17 are formed in the bobbin 14, a line is connected to a terminal 15 at volume the beginning of a coil 21, and the end line of a volume is connected to the terminal 16. Moreover, one lead wire 19 of a thermal fuse 18 is connected to a terminal 17, and the lead wire 20 of another side is connected to the above-mentioned interval terminal 16. The lead wire 20 of a thermal fuse 18 connected to the terminal 16 at this time is twisted around the exterior of the interval terminal 16, and prevents from having inserted the scalpel terminal. In addition, it is directly equipped with the above-mentioned thermal fuse 18 on the coil 21. Drawing 1 is the appearance of the motor which has this coil bobbin.
[0011]
[Effect of the invention] By the above-mentioned configuration, as for this invention, installation of a thermal fuse becomes easy, and an automation of the work by the automaton can be attained.
[0012] And since it prevents from having inserted the scalpel terminal in the interval terminal, accident, such as the non-operativeness of the thermal fuse by incorrect connection and short-circuit, can be prevented beforehand.

[Translation done.]

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EFFECT OF THE INVENTION

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MEANS

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